

PATENT COOPERATION TREATY

PCT**INTERNATIONAL SEARCH REPORT**

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 1021.2005003	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2004/008382	International filing date (day/month/year) 19/03/2004	(Earliest) Priority Date (day/month/year) 21/03/2003
Applicant WORCESTER POLYTECHNIC INSTITUTE		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. **Certain claims were found unsearchable** (See Box II).

3. **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

the text is approved as submitted by the applicant.

the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

the text is approved as submitted by the applicant.

the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regards to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 1

as suggested by the applicant.

as selected by this Authority, because the applicant failed to suggest a figure.

as selected by this Authority, because this figure better characterizes the invention.

- b. none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

Int

ional Application No

PCT/US2004/008382

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 B01D53/22 C01B3/50 B01D71/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B01D C01B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FR 2 820 988 A (CIE D ETUDES DES TECHNOLOGIES) 23 August 2002 (2002-08-23) claims 1,3 -----	1-35
X	US 2002/164496 A1 (BUTT SHAZAD MAHMOOD ET AL) 7 November 2002 (2002-11-07) the whole document -----	1-35
X	US 2002/020298 A1 (DROST ERNST ET AL) 21 February 2002 (2002-02-21) page 4, paragraph 50-52; claims 1-12; figures 1-3 -----	1,15,28, 29
A	US 6 152 987 A (MARDILOVICH PETER P ET AL) 28 November 2000 (2000-11-28) cited in the application the whole document ----- -/-	

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

20 September 2004

28/09/2004

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 496 373 A (BEHR FRIEDRICH ET AL) 29 January 1985 (1985-01-29) the whole document -----	
A	US 5 498 278 A (EDLUND DAVID J) 12 March 1996 (1996-03-12) the whole document -----	
A	DE 101 35 390 A (FRAUNHOFER GES FORSCHUNG) 20 February 2003 (2003-02-20) the whole document -----	

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
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In

International Application No

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